AMENDMENTS TO THE ABSTRACT

Please substitute the following paragraph for the abstract now appearing in the currently filed specification:

3D model storage stores the 3D shape data of a target object and illumination base data in advance. A comparison image generator generates, as a comparison image, a reproduced image with the target object being arranged in the position/posture of the current estimation value under the same illumination condition as that for the input image on the basis of the 3D shape data and illumination base data. An image displacement distribution detector segments the comparison image into sub regions and detects the image displacement distribution between the comparison image and the input image for each sub region. A posture difference calculator calculates a position/posture difference value on the basis of the image displacement distribution and 3D shape data. An end determinator outputs the current position/posture estimation value as an optimum position/posture estimation value when determining that the position/posture difference value is smaller than a predetermined threshold value.